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AN
E S S A Y

ON THE
QUALIFICATIONS and DUTIES

OF AN
ARCHITECT, &c.

WITH
SOME USEFUL HINTS
FOR THE
Young ARCHITECT or SURVEYOR.

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L O N D O N :

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THE
INTRODUCTION.

AS many Gentlemen and others, who are not much acquainted with the Building Business, have blamed Mr. D. Surveyor to the new Gaol, for suffering some Purbeck Portland to be used in the Building ; a Perusal of the following Sheets will, I am persuaded, sufficiently clear up that Point ; as well as acquaint the Public with what is to be expected from an Architect (properly so called) as well as from Surveyors of Buildings in general, and how improperly the Term Architect is frequently applied and assumed.

The Hints given to the ingenuous young Architect or Surveyor, may not prove unuseful ; and I hope they will be no Offence to the more experienced, who, through the Hurry of Business, may not have sufficiently considered the Utility of some of them.

As my Aim, in the following Essay, is to set those Things respecting the Concerns of Gentlemen with Architects or Surveyors, in a just Light, and thereby prevent many Misunderstandings that might arise between them ; I shall be particularly careful to avoid the least Partiality to either of the Parties ; and to speak the plain Truth, without Regard to the obliging any Person, on the one Hand, or designedly giving Offence to any, on the other : And if, in the Course of the Essay, I should *seem* to make a few Digressions,

Digressions, I beg my Reader's Indulgence, and flatter myself he will not find them wholly foreign to the Point in Hand.

I must, however, beg the candid Reader (if he desires to understand thoroughly what I have advanced) not to content himself with reading a Page or two, and then think he knows the Purport of the Whole; since by this Means he will be often mistaken, and be apt to put a wrong Construction on many Words, which a careful and attentive Perusal of the whole Essay will prevent.

I shall not be concerned if any should think I have not sufficiently discussed the Subject; I should be rather glad if others would take up the Pen, and approve themselves of sounder Judgment in this Matter than myself :

myself : At present, I see no Reason why the Subject should be left obscure, because a Person more capable than myself, will not elucidate it in a better Manner.

To conclude, I hope the impartial Reader will attend chiefly to Sentiment, and leave the Inaccuracies of Style to smaller Critics.

A N
E S S A Y, &c.

TH E Term Architect is frequently made use of, and misapplied, by some who do not rightly consider its true Meaning; as well as often assumed by others, who either ignorantly, or designedly, assume that which is not their Right. However, in order to form a just Idea of an Architect, I shall consider, first, what Architecture is.

Now Architecture may be defined, a complete Knowledge in Building; which Knowledge must consist in not only knowing the Rules for designing all Sorts of Edifices, but how the same are to be reduced to Practice, so that in every Respect the Structure may be Convenient, Strong, and Beautiful; and therefore Architecture is properly both an Art and a Science; and is divided into three Parts, viz. Civil, Naval, and Military: Civil Architecture teaches how to erect all Kinds of Edifices for civil Use, such as Houses, Churches, Palaces, Bridges, &c.; Naval Architecture to build all Kinds of Vessels for the Sea or River, from the Yawl to the first-rate Man of War, whether designed for Use,
Pleasure,

Pleasure, or Defence : Military Architecture is commonly taken for that Branch of Architecture, which shews how to strengthen and fortify Places on Land, to defend them from the Violence of an Enemy, by the Erection of Castles, Forts, Ramparts, and the like. From hence it may be easily seen what an Architect, in the absolute Sense of the Word, means ; namely, one that professes the Art of Building in all its various Branches ; not that he is to execute the Whole of a Structure with his own Hands, this we know is absolutely impossible ; and indeed the very Name implies there must be Artificers under him, since it is derived from the Greek Words *ἀρχὸς* Chief, and *τεκτων* an Artificer or Builder ; but then it is supposed he understands *how* all the several Artificers Works in Building *are to be* executed in every Particular.

But as no Man, how learned, industrious, and experienced soever he may be, can possibly be thought to possess so vast a Fund of Knowledge, as is necessary for the contriving, and executing, in any tolerable Manner, all those Works that are either for Civil, Naval, or Military Use ; Mankind have thought proper to consider the Term Architect in a restrained Sense, by applying it principally to him who is able to contrive, and complete an Edifice for civil Use. Hence the Naval Architect is commonly called a Ship-builder, and the Military Architect

chitect an Engineer, by Way of Distinction from the Civil Architect, who is generally simply termed an Architect. Whenever then I use the Word Architect in the subsequent Pages, I would be understood to imply, one qualified to contrive, begin, and complete an Edifice for civil Use. This being premised, I shall shew, it is not without the greatest Reason Men have made this necessary Distinction; as I shall make it appear the Qualifications necessary to the forming a complete Architect, (taking the Word in a restrained Sense) are more than is generally imagined. Monsieur Gautier, an eminent Architect, in his *Traité des Ponts*, or Treatise on Bridges, observes, "there are so many Things to be known in relation to the building of Bridges, either of Wood or Stone, that it is hard to find one Man that is equally qualified with the Knowledge of them all; and it is sufficient, in a Work of Consequence, if many Persons can be found, who all of them together understand well what is to be done." Again says he "a well accomplished Architect is the Soul of the Work, for either the carrying on, the ready Execution, or good Manner of it; and it is impossible this Architect should be so fitly qualified for the Office as that he may be depended on, unless he knows also the practical Part; nor is it possible he should know the practical Part, if he does not know the Parts and Materials to be used in the Work,

and also the Utenfils, Scaffolding, Plum-mets, Engines for raising great Weights, Pumps, Buckets, &c. for emptying and clearing the Foundations, of many different Forms; the Manner of piling the Foundations, great Borers for boring the Rocks, according to their Consistence; Centres or Molds for Arches, the Cut of Stones, and an infinite Number of other Things, which cannot be foreseen; so that for the erecting of a considerable Bridge he ought to be a Person of universal Knowledge, and not ignorant of any Thing that relates to the Mystery of Architecture" (viz. Civil Architecture) "which supposes the Knowledge of all those Things, if he would succeed." Now, if to the contriving, and completing, of Wooden or Stone Bridges, (which is only a small Part of Civil Architecture) such Qualifications are necessary, as are scarce ever to be found in one Man; is it to be wondered at if there are many Things of which the most ingenious Architect will unavoidably be ignorant?

To make this still more evident, I will enumerate some of those Arts and Sciences with which he ought to be well acquainted, at least so far as they are subservient to his grand Design; and these are Drawing, Arithmetic, Geometry, Designing, Optics, Perspective, Hydraulics, and Mechanics, with several other kindred Sciences.

For this I have the Authority of Vitruvius, an ancient Architect, who wrote in
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the Time of Augustus, when Architecture made great Advances to Perfection; as well as of Leon Batista Alberti, an excellent and learned Florentine, who flourished in the 15th Century, and of many others eminent in their Profession. Drawing enables the Architect to express in a graceful Manner his Design on Paper; and Geometry assists him in forming his Lines and Angles so as shall be most conducive to the Strength and Beauty of the Building; Designing assists him in proportioning the several Parts of a Structure, that they may all harmonise, and in making all those Conveniencies that are necessary for particular Edifices; Optics teach him the Effect his Design would have, if executed, with respect to the Spectator, in any given Situation; Hydraulics teach him the Art of conducting Water into Pipes or Drains for the Service of the Building; Perspective furnishes him with a View of his intended Design, as it would appear to the Eye from any particular Point of Sight, and in a great Measure supplies the Place of a Model; Mechanics shew him the Use of the several mechanical Powers, and how to apply them to Machines for raising Weights, &c. and will also furnish him with some Rules for giving a Building its due Strength; without Arithmetic he cannot make any Estimates, or calculate the Weight of any Materials that are used in Building.

Thus were I to proceed, I might shew the

Utility of many more Sciences to the Architect, but let this suffice : I shall only add, he should be well acquainted with the Nature of the several Materials used in Building, such as Bricks, Stone, Timber, Iron, and Glass, together with the several Species of each, their Use, and their Value, as well as with the practical Part of the several Works, and the several Machines, Tools, and Utensils, to be made use of ; and in short, he ought to be, as Alberti observes, “ a Man of a fine Genius, and great Application, of the best Education, of thorough Experience, and especially of strong Sense and sound Judgment.”

I have only given here a *Sketch* of an Architect, but where is even such a one to be found ? where is the Architect that understands all those Arts and Sciences that I have just mentioned ? I believe it will be hard to point out the Man ; however there are some who, not making sufficient Allowance for the Frailty and Fallibility of human Nature, seem to expect this, and perhaps much more, as will be shewn more fully in the subsequent Part of this Essay.

But lest any should imagine it is easy for an Architect to be thus accomplished, especially if he has had all the Advantages of Education, and pursued his Studies with the Vigour he ought, and omitted no Opportunity of Improvement ; I shall in the next Place enquire, whether there is any Probability of a Person's being thus far qualified.

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And in order to this, let us make the following Supposition, and trace him through the several Stages of Life. When an Infant, he very early discovers an extraordinary Genius for Drawing, and particularly for drawing of Buildings for Civil Use; his Parents, willing to encourage this Propensity to the Study of Architecture, are determined to educate him accordingly; they place our young Gentleman, from the Time he can speak to the Age of about Fifteen, under the Tuition of the most eminent Masters, where he improves himself considerably in Drawing, learns to write, makes no small Progress in Arithmetic and Geometry, attains likewise to a tolerable Proficiency in the Latin Tongue, and has some little Knowledge of Greek; he makes also no small Improvement in French, and is enabled to speak it with Fluency; which from its Universality we may reasonably suppose will be no small Advantage to him in his Travels.

He is now, having received a liberal Education, articted to an eminent Architect, to whom is given a very handsome Premium, in order that the Youth may be fully qualified; his Master, who is a conscientious Person, is determined that the young Gentleman shall want no Instruction which it is in his Power to give him; accordingly, the first Year or two, he instructs him how to reduce to Practice those Rules of Arithmetic and Geometry he has learned at School,

by applying them to the Mensuration of the several Artificers Works, taking Care at the same Time that he improves himself in his Drawing, and particularly in every Branch of it relating to Architecture. When about two or three Years are elapsed, the Youth is taught to design, and to draw correctly the Plans, Sections, and Elevations of all Kinds of Edifices; his Master, desirous that nothing shall be wanting to complete him, has proper Persons to give him all necessary Instructions in his Absence; and our Youth is instructed in Mechanics, Hydraulics, and Perspective, which we may reasonably suppose take up much of his Time; and in order that he may not forget his French, which I observed before would be of great Use to him in travelling, Foreigners are employed to teach him those Sciences in French. He is now drawing near the latter Part of the Time he was articted for, and his Master, in order to complete his Education, and form his Taste, takes an Opportunity of either sending or taking him Abroad; if he himself cannot go with him, he takes Care to place him with a Person equally qualified to instruct and assist him: The Youth now makes the Tour of France and Italy, &c. inspects all the ancient Remains of Architecture, measures and makes accurate Drawings of the Ruins, as well as of their original State; studies their Proportions; searches into their Antiquity, explores the Materials
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of which they are composed, and the Manner in which they are put together, and makes every Observation that is likely to prove of the least Utility: when this is done, he turns to the Works of the Moderns, examines *them* carefully, compares them with the ancient Works, marks their Difference, and improves upon both in his own Designs: Thus he proceeds, 'till he has informed himself of every Thing curious and useful among the Works of either the Ancients, or the Moderns. He now returns Home, at the Age of about Two or Three and Twenty, after having made the very best Use of his Travels, and in a short Time after commences Business for himself, and is by Profession an Architect.

I am persuaded no one will think I have allowed too much Time for our Architect to qualify himself in those Things I suppose him Master of, and which are necessary for a complete Architect to know; and yet, after all the Advantages of Education, the Strength of Genius, and the Severity of a close Application, he is still amazingly deficient; he knows nothing of the practical Part of Business, is almost totally unacquainted with the major Part of the Materials used in Building, is a Stranger to their Nature, their Use, their Value, &c.; he has but little Knowledge of the several Tools, Utensils, and Machines used in Building, and not knowing the practical Part of the several

Artificers Works, he cannot fix their Value; and I will venture to assert, if our Architect was now to attend to the practical Part of the Bricklayers, Carpenters, Masons, Plaisterers, Plumbers, and Glaziers Work, &c. he would be so far from ever being fully qualified, that, while he was attending to one Branch, he would be losing another; not to mention that his Attention to the Artificers Works would infallibly erase from his Mind almost every Thing he had learned in his younger Years, and he would in Process of Time, for Want of Practice, be almost as great a Stranger to Drawing and Designing as if he had never learned either.

If this then is the Case, it must follow, that those who do not thus improve their Time must be still more deficient; and that those who would wish to improve every Moment, yet if destitute of these Advantages and Opportunities, they too must be in the same Predicament.

Hence it appears how superficially they judge, who imagine fine Drawing a principal, if not the only Qualification requisite for a good Architect; I will allow, that to design well is essential either to an Architect, or principal Surveyor; but to draw fine is one Thing, and to design well is another, and those Persons who excel in the former, are very often deficient in the latter; and indeed, I think, it is easy to conceive a bad Design in Architecture may make a good Picture,
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when a good Design, thro' the Want of a masterly Stroke in the Drawing Part, shall make a bad Picture; but this is a Distinction that is seldom adverted to; and very often a good Design is condemned because it is ill drawn, and, on the contrary, a bad Design approved of because it is well drawn.

It also appears that the Sciences claim a Precedence in Architecture, and indeed it is to be lamented if Men of Science should be neglected; very great Encouragement is given to Artists in general, but the former are undoubtedly much more serviceable to the Community than the latter.

From the preceding Pages I think it is evident an Architect ought to be a Person of universal Knowledge in the Building Business, which I have shewn is so extensive in its Nature that it is highly improbable any one Person should be possessed of it; it remains then to consider who may with a Degree of Propriety assume the Title of an Architect, and what is to be expected from him.

And here I would first observe, he should be well acquainted with every thing *Material* and *Essential* respecting a Building; and as all Structures should have Strength, Convenience, and Beauty, the Architect must take Care, as far as in him lies, to promote these.

In order that a Building may be strong, it must first have a good Substruction or Foundation; for, as Sir Henry Wotton observes " if
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the Foundation dance it will marr all the Mirth of the House ;" the Walls should be of a due Thickness, with proper Bond, and composed of good Materials, well secured at the Angles, and built perpendicularly, (except in some rare Cases) and diminish in Thickness as they rise in Height ; the Water Tables or Sett-offs should, if possible, be equal on the Outside and the Inside of the Building, so that a perpendicular Line may pass thro' the Centre of the Wall at Top and Bottom, which will prevent in a great Measure either its overhanging, or battering : The Walls should not be worked up all at one Time, lest the superincumbent Weight crush the Work underneath : The Timbers of the Floors should be of a proper Scantling, the principal Beams particularly not too slight, nor too heavy ; if the former, the Floor will be in Danger of tumbling in ; if the latter, the Beam will sag with its own Weight, (except well trussed) and bring on Ruin and Destruction.

The Roof should be so contrived, if possible, that each of the Walls may bear their Part, neither too heavy, nor too light ; if the former, the lateral Pressure of the Rafters will tend to shove out the Walls ; if the latter, it will be in Danger from every Storm : The raising Plates should be firmly bound at the Angles, and the Whole well tyed in, that it be in no Danger of falling.

To render a Building convenient, it must
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be well designed, and suited to the State and Dignity of its Inhabitant ; not that I think the Architect is obliged to know every Convenience that is necessary for any particular Branch of Business: I do not conceive, for Instance, an Architect is any more obliged to know what Rooms and Places are necessary for a Sugar House, than he is to know what Kinds of Fixtures and Utensils are wanting in such a Place ; in all these Cases those Persons must be consulted for whose Use the Building is erected ; but with respect to every Convenience for a Nobleman's and Gentleman's Dwelling, it is not permitted the Architect, who is supposed to have received a liberal Education, to be ignorant of them.

Convenience must likewise be consulted in the Construction of Drains, Cesspools, and Pipes, that Water may be conducted for the Service of the House, as well as all the foul or Rain Water cleanly carried off, that might otherwise damage, or be a Nuisance to the Building.

The Situation of the Edifice should be likewise considered : If it is intended to be built in the Country, it should, if possible, be near Wood and Water, and if a running Water is near the Spot it will be a great Advantage ; the Front should be towards the South, and the Site a rising Ground, and not far from a Road ; and it will be no small Advantage if a Reservoir can be found at some
Distance

Distance from the Edifice, and of such a Height, that Water may be conveyed by Pipes to any Part of the Building; Care must be likewise taken to place the Offices so that they may be no Annoyance to the House: If the Structure is to be erected in Town, it should be in an open airy Street or Square, where there are several Avenues, and in a genteel Neighbourhood.

To render a Building Beautiful, the several Orders and their Parts must be judiciously introduced; the Parts should be well proportioned, the smaller Members to one another as well as to the Whole; the Decorations in general executed with Taste, and not foreign to the Design.

And here I beg Leave to observe, if Ornaments were never introduced but where they would be missed, this single Circumstance would often add greater Dignity to a Building than most Persons are aware of; for it is not a Profusion of Ornaments that gives Elegance to a Structure, but the judicious Disposal of them, which any one of sound Judgment may see, in those Buildings that are decorated in so unmeaning a Manner, that they give Disgust to the Eye at first Sight, whereas, if they had been quite plain, they perhaps might have been admired; I shall not single out any Instances, they are too numerous in this Metropolis to escape Notice.

I have hinted chiefly here what should be observed in the Erection of Houses, Palaces, Mansions,

Manfions, and Country Seats; but with refpect to Bridges, Churches, and the like, the fame Regard muft be had to their feveral Parts.

And if the profeffing Architect can thus, and in every other Refpect, begin, carry on, and complete an Edifice in the *Material* and *Effential* Parts, and adds to this Knowledge that of eftimating a Building nearly, fo that his Employer may not through him begin to build before he knows the Coft; and if he likewise takes the greateft Care he can to have proper Clerks, and Sub-Surveyors, to infpect all the Materials, as well as the Execution of the Work, when his Abfence is neceffary, and to fee to the finifhing of the Building without any unneceffary Delay, in the Joiners, Painters, and Glaziers Work, &c.; if he alfo employs proper Meafurers (Men of known Ability and Reputation) whole whole Buſineſs is to meafure and eftimate the feveral Artificers Works, to aſſiſt him in settling the Bills, in a fair, juſt, and impartial Manner; and in every other Refpect diſcharges the great Truſt repoſed in him; he may, with Propriety, call himſelf an Architect.

Not that I think no one ſhould preſume to undertake the Superintendance of a Building, but he that can properly aſſume the Title of an Architect; No! but then, I think, he who does not come up to this Standard, ſhould rather ſtile himſelf a Surveyor; which,

which, being a Term much less determinate in its Signification, may be used with Propriety. I would likewise observe, the Difference between the Architect and Surveyor will be only this, that whereas the former knows every Thing himself, that is *Essential* towards making *every* Building Strong, Convenient, and Beautiful; the latter, in those Things that he is deficient in, must seek Assistance from others; and his Connections in Business will easily furnish him with the Acquaintance of those who are perfectly well qualified to give him such Assistance; and such a Surveyor will complete a Structure as well as the most accomplished Architect: And, indeed, the fewer Sciences a Man professes, and there are many subservient to Architecture, it may reasonably be expected he should be the more perfect in them; so that the principal Surveyor of a Building (who at the least should understand something of the practical Part, as well as Designing and Estimating) with a little Assistance will, in all Probability, complete even a Building of Consequence better than the Architect *alone* would; and, upon Examination, it will be found, that most of our modern Architects are only, strictly and properly speaking, Surveyors, and do not come up to the Character of an Architect, as I have, and I hope with Propriety, defined the Term.

It is much to be wished that Noblemen
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and Gentlemen would consider the true Meaning of the Words Architect, and Surveyor, and endeavor to form right Ideas of the Terms; I am certain they would not then expect more from Architects than they are really able to perform. It is true, as Mr. Locke observes, "Some Ideas are so complex, and made up of so many Parts, that the Memory does not easily retain the very same precise Combination of simple Ideas under one Name," and the Idea of an Architect is, undoubtedly, a very complex one; but then, before we pass our Judgment on an Architect, we should give ourselves Time to recollect our scattered Thoughts; and, to use Mr. Locke's Words, unite into "our complex Idea" of an Architect, "as precisely as is possible, all those Ingredients whereby it is differenced from others;" and it is chiefly the Design of this Essay to give some Assistance in this Respect.

It is certain, was an Architect to attend to every trifling Thing in the Execution of a Building, of little or no Consequence, he would be apt to commit a Blunder of great Consequence, and would be in the same Predicament as Horace's Statuary, who was a notable Fellow at finishing the Fingers and Toes of his Statue, but failing in the general Proportions of his Figure, made but a bungling Job of the Whole; and an Attention to every minute Particular in the Building Business, is rather the Part of a
common

common Workman than an Architect, or principal Surveyor. And here I cannot but observe, there are some Architects and Surveyors, who, notwithstanding they are bound by their Indentures to teach their Apprentices the whole Art and Mystery of their Profession (at least as much of it as they know themselves) yet make a Practice of keeping them in Ignorance of several Branches of Knowledge in the Building Business, and with what Views may be easily conjectured. I know an ingenious young Man, who served his Time to a very eminent Surveyor, and during his Apprenticeship was suffered to do little or nothing else but draw; at the Expiration of his Time he proved an exceeding good Draughtsman, but being ignorant of almost every Thing else relating to the Profession of an Architect or Surveyor, was glad, for a very small Salary, to stay with his Master; who, being well established in Business, could constantly employ him in Drawing.

I know another Surveyor, who was so jealous of the Genius and Abilities of his Apprentice, that he carefully locked up every Book of Architecture from him, and never suffered him to look into one, but upon some urgent Occasion in Business, when he could not well avoid it; whatever some may do, I cannot reconcile the Behaviour of such Gentlemen with the Golden Rule of doing as we would be done by.

I shall

I shall now beg Leave to consider, whether Mr. D. is justly reprehensible for suffering some Purbeck Portland to be used in the new Gaol. In order to clear up this Point I shall enquire; First, Whether the using of this Purbeck Portland affects *materially* the Strength of the Building;

Secondly, Whether it was not the particular Business of the Clerk of the Works, not only to inspect the Execution, when Mr. D.'s Absence was necessary, but likewise ALL the Materials, to see they were such as were either intended should be used by Mr. D. or particularly agreed on with the several Master Artificers before the Works were begun; and,

Thirdly, I shall shew, that this Clerk of the Works cannot be supposed to know the Names and Nature of all Kinds of Materials that *may be* used in Building.

And first, I am to enquire, whether the using of this Purbeck Portland affects *materially* the Strength of the Building.

Here a few Words will suffice; for it is well known the Purbeck Portland is harder, and more solid than the real Portland, and that it is not in the general more brittle, or apt to break or give way, but will stand as well as most of the real Portland, and especially where it is not exposed to the Air. A great Part of Ramsgate Pier, I am credibly informed, is built with Purbeck Portland;

land; and the Sea continually dashing against it, as well as its being much exposed to all Sorts of Weather, must greatly prove its Strength; and indeed, supposing it was of a soft Nature, yet, if properly introduced in a Wall, it would no ways endanger it. Leon Batista Alberti informs us, the Ancients often composed their Walls of both soft and hard Materials, but, by their Care in blending them together, sufficiently fortified their Works, and made them durable for Ages. I think now it may be allowed, that no *material* Error, respecting the Strength of the Building, has been committed.

But it may be objected, the Purbeck Portland, though it may not affect *materially* the Strength of the Building, is yet inferior to the Portland; it is not of so good a Quality, nor is it so valuable.

If those who make these Objections, would rightly consider what has been advanced in the preceding Pages, they would clearly see these Objections ought by no Means to affect Mr. D.

However, in order to obviate every Objection, I shall enquire,

Secondly, Whether it was not the particular Buiness of the Clerk of the Works, not only to inspect the Execution, when Mr. D.'s Absence was necessary, but likewise *all* the Materials, to see they were such as were either intended should be used by Mr. D. or particularly agreed on with the several

Master

Master Artificers before the Works were begun.

That a Clerk of the Works was always supposed necessary in Buildings of Consequence, we learn from the Ancients, and Vitruvius calls him *Officiator*; by which he means not barely a Workman, as the Word is rendered in the Latin Dictionaries, but a chief Workman, who is to examine, and sort ALL the Materials for every particular Part of a Building, and is very properly called, in the English Language, a Clerk of the Works.

Now, if in the Opinion of Vitruvius, as well as of Sir Henry Wotton, and other eminent Architects, it is this Clerk's Business to inspect and examine ALL the Materials, it follows, that the Clerk of the Works under Mr. D. should have seen the Stone was such as was intended should be used. If it still be said, Mr. D. should have taken Care to have appointed a more proper Person, to have been this *Officiator* or Clerk; I answer, I do not know whether the Gentlemen of the Committee, appointed for carrying into Execution the new Gaol, &c. might not appoint this Person; and if not, I shall shew,

Thirdly, That this Clerk of the Works cannot be supposed to know the Names and Nature of all Kinds of Materials, that may be used in Building.

And here it is very certain, that there are many, who have had much Experience, and who have been the great Part of their Lives

conversant in one particular Branch of the Building Business, who nevertheless are ignorant of the Names and Nature of several Materials, that *may be* used in their own Business. Experienced Carpenters and Joiners will differ in their Opinions about the Names and Nature of several Sorts of Wood; and it is well known, for Instance, that Chesnut has been often mistaken for Oak, by very good Workmen; and indeed the several Species of Wood are so numerous, the major Part of which come so seldom in Use, that it is not surprizing if Men of Experience and Judgment should not only disagree, but if even some of them should never have heard of the Name of a Species of Wood, offered to them for Inspection; and the same may be said of Stone. But it may be again objected, If a Clerk of the Works cannot be acquainted with every Material that *may be* used in Building, he ought to be acquainted with those that are *generally* made use of.

I believe it would not be a very easy Matter to find a Person that should be well acquainted with the Names and Nature of all those Materials that are in *general* Use, which I could easily prove; but waving this, I answer, It does not appear that Purbeck Portland is one of those Materials that are in *general* Use, and especially in London. I know some experienced Masons who never worked up any of the Sort in their Lives; and I much Question if there are five Masons in this Metropolis that ever used it, not to mention the many Hundreds that,

that, perhaps, never saw it, or even know it from the other Portland when they do see it; for the Difference cannot be discerned by barely looking at it; so that it is so far from being a Material in *general Use*, that it is *Rara Avis in Terrâ*: If it is asked, How it happens that it is not in more general Use, as I have affirmed it to be Strong and Durable, and therefore might answer the Purpose in some Cases? I answer, I know not, any more than why Ash, Beech, Chesnut, Quickbeam, Hornbeam, Maple, Cherry-Tree, &c. which are all the Growth of England, are not in more general Use; which an eminent Author affirms to be as Strong and Durable, for many Purposes, as most Timbers, and will, I believe, often come much Cheaper than those that are generally used.

I think no one can suspect Mr. D. of siding with the Mason, or winking at the Use of this Purbeck Portland; for, as the strictest Honesty and Impartiality are, in my Opinion, essential to the very Being of an Architect or Surveyor; he must be very weak, who would knowingly give the World the least Reason to suspect his Conduct, especially at a Time when the Prosecution and Completing of the Work he superintended, would greatly encrease both his Reputation and his Interest. It cannot, therefore, be supposed Mr. D. would, through mere Partiality to the Person of the Mason, and without the least View of any pecuniary Advantage or Emolument whatever, suffer him

to use the Purbeck Portland; much less would he receive a Bribe. To suppose the former, must evince the greatest Absence of Thought; since Mr. D. must know, from his own Experience, the World is so censorious, that it often aggrandizes the smallest Faults, and would not fail in such a Case to affirm he was actually bribed by the Mason.

To suppose the latter, would argue as great a Piece of Folly as of Knavery; since the Emolument arising from such a Conduct, could not possibly be adequate to the Hazard he would run of not only losing his Reputation, but his whole Business, in which he is at present so well established. Such a Conduct would naturally tend to diminish his Authority over the Workmen; and when he had once been guilty of a Fraud of this Nature, the least Opposition on his Side, would certainly blow the smothered Spark into a Flame, which would infallibly, by Degrees, spread itself abroad, and affect both his Reputation and Estate.

Therefore, unless we suppose Mr. D. to be a Man void of common Sense, and common Prudence (which his Education and Abilities will not allow) it is absurd to imagine he would act in a Manner, that would immediately tend to destroy both his Character and his Interest.

I should not have been so particular with respect to Mr. D. &c. but to convince Mankind (if possible) of the Absurdity of expecting a Man should know Things out of his Reach; which, says one, "is the Imperfection of his Nature,

Nature, not Knowledge; for mortal Eyes cannot see beyond their Horizon:" And since all Mankind are fallible, how unjust, as well as absurd is it, to expect an Architect or Surveyor, any more than another, should be infallible, and that *he alone* should never be deceived. If to great Geniuses large Allowances should be made, surely the Architect may lay claim to such Indulgence, unless some rare Genius should make it appear an Architect need have no Genius at all.

I know not from what Motive the Gentleman acted, who reported to the Committee the Purbeck Portland was used; but I think it would have been but generous in him to have privately acquainted Mr. D. with it, or rather the Clerk of the Works; especially as this Gentleman *knew* the Purbeck Portland was not in general Use, and therefore not likely to be generally known; which I shall always think a sufficient Apology for the Clerk of the Works being ignorant of it; and it is certain there is no Architect or Surveyor whatever, but what must unavoidably be ignorant of many Materials that *may be* used in Building; and if the Gentlemen of the Committee had considered this Matter seriously, I am persuaded they would not have blamed the Architect, but rather considered the Mason as the only culpable Person, who endeavored to impose it on the Architect, &c. for the real Portland.

If there is any Thing else the Gentlemen of the Committee think blameable in Mr. D. I know nothing of it, neither do I undertake a formal Vindication of Mr. D.'s Conduct in every Particular, being so little acquainted with it; but thus much I thought proper to say, in Justice to him as well as for the Benefit of others.

And I think, if Gentlemen do not give themselves Time to consider, and weigh seriously every Circumstance, that tends to discourage Men of Experience, Genius, and Ability, it is not to be wondered at if such, (especially if they are Independent) are not forward to offer their Service; but, retiring into Obscurity, leave the Management of the weightiest Affairs, oftentimes, to the bold and rash Attempts, of the Ignorant and Inconsiderate.

SOME
USEFUL HINTS
FOR THE

Young ARCHITECT or SURVEYOR, &c.

IF you are a young Man, it is highly probable you cannot with Propriety stile yourself an Architect; I do not say positively you cannot, it is possible for even a young Man (if he has but Opportunity) by a right Course of Study, and close Application, to supply, in a great Measure, the Want of Experience, and to attain to as much Knowledge as is necessary to complete the Essential Parts of a Structure: But then you must remember, the more you profess, the more will be expected from you; and if in coming into Business you stumble at the Threshold, it is well if you are not disabled from ascending the Steps of Preferment. I remember reading a Story, related by an ingenious Author, the Substance of which, I think, is as follows; an ostentatious Surveyor, willing to be thought a good Draughtsman, made a Practice of having his Drawings always done by a Substitute, (who executed them in a very neat Manner) and constantly imposing them on Gentlemen, for Drawings begun and finished with *his own Hand*; he one Day waited on a Gentleman with a Drawing, who suspecting the Man, engaged him to stay

stay an Hour or two, and procuring him Pencil and Paper, desired him to make a fair Drawing of a small rough Design the Gentleman had in his Possession ; you may imagine how thunderstruck our Hero was ; who, after having made many aukward Excuses, and betrayed his Inability, met with a severe Reprimand, and was turned out of Doors for his Pains.

I would advise you to take a Hint from this, and never profess to know more than you really do ; which will effectually secure you from sharing the same Fate. Neither will your calling yourself a Surveyor, rather than an Architect, (if you cannot with Propriety assume the Name) be any Detriment to you ; for since the Words Architect and Surveyor are, with many Persons, who do not consider the essential Difference, synonymous Terms, these will never think the less of your Abilities on that Account ; and to those who do make a Distinction, you will only expose yourself by professing more than you know : And be content with taking sure Steps, which will raise you by Degrees with Ease and Security, rather than attempt to jump too high at once. If, therefore, you are at any Time complimented with the Title of an Architect, by those who do not make any Distinction between the Architect and Surveyor, receive it as a Compliment, but do not arrogantly assume it as your Right.

However, whether you call yourself the one or the other, endeavour to preserve your Reputation

tation by a prudent Behaviour in every Respect.

Never court the Company of those who are only respected for their Money; but seek the Acquaintance of such as are your Superiors, Men of undoubted Sense and Abilities; and be swift to hear every Thing that may tend to give you the least Instruction; always taking Care to behave with the greatest Respect to them, as well as having the greatest Respect for them; and if at any Time any such should be prejudiced against you, by the artful Insinuations of an Enemy, or a certain Contrast of Behaviour, (which is sometimes the Case) endeavour to remove that Prejudice, by being affable, and open; but if you cannot, shun their Company, and do not, by your Presence, heighten their Prejudice to a settled Hatred (for you must not expect to please all the World) remember the Fable of the old Man, his Boy, and the As; and even where your Behaviour is unexceptionable in every Respect, you must expect to meet with Enemies who will always have something to say against you, for *Qui vult cadere Canem, facile invenit Fustem.*

Rob not Fame of her Office, by sounding your own Praise, lest in Revenge she trumpet forth something to your Disadvantage; neither divulge your Intention of doing any Thing of Consequence; this will only make you a Laughing-Stock to some, if you do not succeed, while others will think you are either not adequate
to

to the Task, or have not Resolution and Steadiness enough to prosecute your Work.

Give not yourself up to the fashionable Vices of the Times; the Body Politic groans under a Complication of Disorders, and it is your Duty to assist in the Cure of them; and supposing you can use only the most simple Medicines, yet such, if rightly applied, may do Wonders.

Avoid particularly Swearing in common Discourse, that Bane of Society, which sinks a Man to a Level with those in the Purlieus of Billingsgate and St. Giles's.

Shun Drunkenness, and lewd Women; for they will infallibly cloud your Faculties, and render you unfit for Business. Use every Opportunity to improve yourself; let nothing curious in any of the polite Arts or Sciences escape you, that is likely to be of the least Utility.

Be not too forward in offering your Service: The Architect, says an eminent Author, "should not, when he hears any one is going to build, run hastily to offer his Service: I know not," says he, "whether he ought not to stay till he is more than once intreated." This is strange Language, I make no Doubt, to some of our modern Architects, who, not content with one or two Places, are for grasping all they can get; but Men, who have nothing in View but increasing their Wealth, will sacrifice every Virtue to the Shrine of Avarice: But I take it for granted such cannot be very Ingenious,

since there is a Contrast between the Avaricious and Ingenious, that cannot be easily reconciled. However, I would not advise you to be always so stiff as to stay till you are more than once intreated; such a rigid and sour Behaviour would make you despised, and held in but little Esteem; nevertheless, in some very particular Cases, Reservedness will be prudent, which your Experience will teach you better than any Precepts can.

You may, perhaps, have a Family to support, and cannot, with all your Industry and Ingenuity live comfortably; and I must confess, in this Case, you will be obliged to make Application to those very Persons sometimes, who ought rather to have applied to you. But here I would have you act with the greatest Prudence, and never make the Largeness of your Family, or your particular Distresses, *and* Reason for your Application. Still preserve your Reputation; and if you are compelled to offer your Service, do it in such a Manner (if possible) as not to give those to whom you apply the least Reason to think your Offer proceeds from distressing Penury, or Want; if you do, you will often be rejected on that very Account, let your Talents be ever so great.

I once heard of an Apothecary, who was a Candidate to succeed another in an Hospital; this Gentleman, tho' esteemed in point of Abilities, equal, if not superior, to his Opponent, nevertheless had the Mortification to see him-
self

self rejected; because, in his Application, he urged the Largeness of his Family, which he hoped would be a Recommendation; for when the Day of Election came, "What!" said the Governors, "does this Man think we shall take him out of Charity, to maintain his Family?" Thus, by a wrong Judgment on their Side, occasioned by an imprudent Conduct on his, he lost the Place, when, in all Probability, had he kept his own Counsel, he would have been chosen: So necessary does it appear, in some Situations of Life, to preserve an Appearance of Independency, even in the Midst of Poverty. I would have you seek Employment with the greatest Diligence, tho' with an apparent Indifference; suiting your Application to the Times, Circumstances, and Humours of Persons, and making your Court to great Men but seldom, lest you appear troublesome.

It was nobly answered by a Philosopher, who, being asked in Derision why Philosophers made their Court to rich Men, and not rich Men to Philosophers? replied, Because the latter know their Wants, the former do not: However, it is much better to court the Rich, so as not to seem to want them at all.

Be careful to gain the Good-will of the Workmen under you, by a kind, affable, and gentle Behaviour; and be always ready to assist them to the utmost of your Power, and plead their Cause, if at any Time they or their Families are in Distress. Be civil and complaisant to all Tradesmen, and ready, whenever you find an honest

honest and industrious Tradesman, to recommend him: By this Carriage no small Advantage will redound to yourself; the Workmen will work more chearfully under you, do their Work better, and complete it sooner, than otherwise they perhaps would do; and, little as you may think it, an experienced Workman may sometimes give you a Hint that may prove of no small Utility in Business. Nor is it beneath your Dignity as an Architect, or principal Surveyor, to receive Information from such. The ingenious Labelye, after having acknowledged that he consulted the respective Master Artificers employed for completing Westminster Bridge, says, "it is not unlikely that the self-sufficient or self-conceited will smile at my mentioning this; but I would have them to know, the greatest Architects and Engineers have always done, and own'd the same; and if some of those, who pretend to be very great Masters in the Building, or Engineering Way, entertained a less Opinion of their own Abilities, and a greater of those of the Persons who are to execute what they project, we should not daily see so many Proofs of Ignorance and Presumption going generally Hand in Hand:" And indeed, I think his Observation is very just; for he that is above learning something, even from the most illiterate, will never know any Thing as he ought.

To conclude, If a Gentleman, who employs you, seems not satisfied with your Conduct, and you are desirous of knowing how
you

you should act in such a Case; I answer, **Examine** yourself, whether you have done your Duty or not, and particularly with respect to the *Essential* Parts of the Building entrusted to your Care, and whether you have acted honestly and uprightly with respect to the Expence, and taken as much Care as possible to prevent your Employers being imposed on; if, upon the closest Examination, you find you have faithfully discharged your Duty, represent it to him in the strongest and most respectful Terms; and if, after all, he still appears dissatisfied, I think it will be best to resign a Post you cannot fill to give Satisfaction.

F I N I S.

